

**Patent claims**

1. A thin-walled rolling bearing, such as a needle bearing, produced without removal of material, the  
5 outer rings of which bearing are produced from a cold-rolled strip, characterized in that the outer rings are produced from a cold-formable, fully hardenable steel, a ratio of from 1:20 to 1:5 being set between their wall thickness and the diameter of the  
10 bearing needles, and the fully hardened wall having a core hardness of  $\geq 600$  HV and a surface hardness of  $\geq 680$  HV.

2. The rolling bearing as claimed in claim 1,  
15 characterized in that the core hardness is from 600-650 HV and the surface hardness is from 680-750 HV.

3. The rolling bearing as claimed in claim 1, characterized in that a heat-treatment steel with the  
20 following chemical composition is used:

|                    |                 |
|--------------------|-----------------|
| 0.37 - 0.50 % C    | up to 0.50 % Cr |
| up to 0.40 % Si    | up to 0.40 % Ni |
| 0.50 - 0.80 % Mn   | up to 0.10 % Mo |
| 25 up to 0.020 % P | up to 0.20 % Cu |
| up to 0.020 % S    |                 |

4. A universal joint bush (8) for receiving a bearing pin which is mounted in rolling bearing form and is  
30 formed from a cold strip as a thin-walled needle bearing bush which is produced without the removal of material and the closed base of which is used for a universal joint pin to bear against at the end side, characterized in that it is produced from a cold-  
35 formable, fully hardenable steel, the fully hardened wall having a core hardness of  $\geq 600$  HV and a surface hardness of  $\geq 680$  HV.

5. The universal joint bush (8) as claimed in claim 4, characterized in that the core hardness is from 600 - 650 HV and the surface hardness is from 680 - 750 HV.

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6. The universal joint bush (8) as claimed in claim 4, characterized in that a heat-treatment steel with the following chemical composition is used:

|    |                  |                 |
|----|------------------|-----------------|
| 10 | 0.37 - 0.50 % C  | up to 0.50 % Cr |
|    | up to 0.40 % Si  | up to 0.40 % Ni |
|    | 0.50 - 0.80 % Mn | up to 0.10 % Mo |
|    | up to 0.020 % P  | up to 0.20 % Cu |
|    | up to 0.020 % S  |                 |